

In the Claims:

Claims 1 to 16 (Canceled).

1 17. (New) An arrangement for detecting a shaft break on a rotor  
2 of a first turbine (10), particularly a medium pressure  
3 turbine of a gas turbine, particularly of an aircraft  
4 engine, whereby a second turbine (11), particularly a low  
5 pressure turbine, is positioned downstream of the first  
6 turbine (10), with an operator element (16) positioned  
7 between the rotor of the first turbine (10) and a stator of  
8 the second turbine (11) radially inwardly relative to a  
9 flow channel, and with a sensor element (21) guided in the  
10 stator of the second turbine (11), in order to convert a  
11 shaft break, detected by the radially inwardly positioned  
12 operator element (16), into an electrical signal and to  
13 transmit this electrical signal to a switching element  
14 which is positioned radially outwardly relative to the flow  
15 channel on a housing of the gas turbine.

1 18. (New) The arrangement of claim 17, characterized in that  
2 the operator element (16) is positioned between a last  
3 rotor blade ring of the first turbine (10), as seen in the  
4 flow direction, and a first guide vane ring of the second  
5 turbine (11), as seen in the flow direction.

1 19. (New) The arrangement of claim 18, characterized in that  
2 the operator element (16) is positioned radially inwardly  
3 and neighboring to a rotor disk (12) of the last rotor  
4 blade ring, as seen in the flow direction, of the first  
5 turbine (10).

1 20. (New) The arrangement of claim 17, characterized in that  
2 the operator element (16) is guided in a radially inwardly  
3 located sealing structure (13) of the stator of the second  
4 turbine (11) in an axial direction or in the flow  
5 direction, whereby the operator element (16) is fixed in  
6 the axial direction by a shearable pin (18).

1 21. (New) The arrangement of claim 17, characterized in that  
2 the sensor element (21) is guided in a radial direction in  
3 the stator of the second turbine (11), and is withdrawable  
4 out of the stator of the second turbine (11) in the radial  
5 direction.

1 22. (New) The arrangement of claim 21, characterized in that  
2 the sensor element (21) is guided in a first guide vane  
3 ring of the second turbine (11) as seen in the flow  
4 direction.

1 23. (New) The arrangement of claim 20, characterized in that  
2 the sensor element (21) cooperates, at a radially inwardly  
3 positioned end, with the operator element (16) in such a  
4 way that, in response to a shaft break, the operator

5 element (16) is moved onto the sensor element (21) and hits  
6 the same while the pin (18) is sheared off, whereby the  
7 sensor element (21) generates thereof an electrical signal  
8 that represents a shaft break.

1 24. (New) The arrangement of claim 17, characterized in that  
2 the sensor element (21) is constructed as an impact sensor  
3 the structure of which is changed by an impact of the  
4 operator element (16) onto the same.

1 25. (New) A gas turbine, particularly an aircraft engine, with  
2 at least two compressors, at least one combustion chamber,  
3 and at least two turbines, and with an arrangement for  
4 detecting a shaft break in a rotor of a first turbine (10),  
5 particularly a medium pressure turbine, whereby a second  
6 turbine (11), particularly a low pressure turbine, is  
7 positioned downstream of the first turbine, characterized  
8 in that an operator element (16) is positioned between the  
9 rotor of the first turbine (10) and a stator of the second  
10 turbine (11) radially inwardly relative to a flow channel,  
11 and in that a sensor element (21) is guided in the stator  
12 of the second turbine (11) in order to convert a shaft  
13 break detected by the radially inwardly positioned operator  
14 element (16) into an electrical signal and to transmit this  
15 electrical signal to a switching element which is  
16 positioned radially outwardly relative to the flow channel  
17 on a housing of the gas turbine.

1 26. (New) The gas turbine of claim 25, characterized in that  
2 the operator element (16) is positioned between a last  
3 rotor blade ring of the first turbine (10), as seen in the  
4 flow direction, and a first guide vane ring of the second  
5 turbine (11), as seen in the flow direction.

1 27. (New) The gas turbine of claim 26, characterized in that  
2 the operator element (16) is positioned radially inwardly  
3 and neighboring to a rotor disk (12) of the last rotor  
4 blade ring, as seen in the flow direction, of the first  
5 turbine (10).

1 28. (New) The gas turbine of claim 25, characterized in that  
2 the operator element (16) is guided in a radially inwardly  
3 located sealing structure (13) of the stator of the second  
4 turbine (11) in an axial direction or in the flow  
5 direction, whereby the operator element (16) is fixed in  
6 the axial direction by a shearable pin (18).

1 29. (New) The gas turbine of claim 25, characterized in that  
2 the sensor element (21) is guided in a radial direction in  
3 the stator of the second turbine (11), and is withdrawable  
4 out of the stator of the second turbine (11) in the radial  
5 direction.

1 30. (New) The gas turbine of claim 29, characterized in that  
2 the sensor element (21) is guided in a first guide vane

3 ring of the second turbine (11) as seen in the flow  
4 direction.

1 31. (New) The gas turbine of claim 28, characterized in that  
2 the sensor element (21) cooperates, at a radially inwardly  
3 positioned end, with the operator element (16) in such a  
4 way that, in response to a shaft break, the operator  
5 element (16) is moved onto the sensor element (21) and hits  
6 the same while the pin (18) is sheared off, whereby the  
7 sensor element (21) generates thereof an electrical signal  
8 that represents a shaft break.

1 32. (New) The gas turbine of claim 25, characterized in that  
2 the sensor element (21) is constructed as an impact sensor  
3 the structure of which is changed by an impact of the  
4 operator element (16) onto the same.

**[REMARKS FOLLOW ON NEXT PAGE]**